

**H3 Hemagglutinin (HA) Protein with C-Terminal Histidine Tag from Influenza Virus, A/Brisbane/10/2007 (H3N2), Recombinant from Baculovirus**

**Catalog No. NR-50437**

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**Contributor and Manufacturer:**

BEI Resources

**Product Description:**

A recombinant form of the H3 hemagglutinin (HA) protein from influenza A virus, A/Brisbane/10/2007 (H3N2)<sup>1</sup> containing a C-terminal histidine tag was produced in Sf9 insect cells using a baculovirus expression vector system and was purified by nickel affinity chromatography. The predicted protein sequence is shown in Table 1. The HA protein includes a C-terminal peptide containing a thrombin cleavage site, trimerizing (foldon) domain and eight histidine residues.<sup>1,2</sup> The full-length HA precursor protein is 566 residues (GenPept: AIW60702).<sup>2,3</sup> **Note that NR-50437 does not exhibit hemagglutination activity.**

**Material Provided:**

Each vial contains 50 µg to 150 µg of purified recombinant HA protein in PBS (pH 7.4). The protein content in µg and the concentration, expressed as µg/mL, are shown on the Certificate of Analysis.

**Packaging/Storage:**

Purified recombinant HA protein was packaged aseptically, in screw-capped plastic cryovials. This product is provided on blue ice and should be stored at -20°C immediately upon arrival.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: H3 Hemagglutinin (HA) Protein with C-Terminal Histidine Tag from Influenza Virus, A/Brisbane/10/2007 (H3N2), Recombinant from Baculovirus, NR-50437."

**Biosafety Level: 1**

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed.

Washington, DC: U.S. Government Printing Office, 2009; see [www.cdc.gov/biosafety/publications/bmb15/index.htm](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

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**References:**

1. Fiore, A. E., et al. "Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2008." MMWR Recomm. Rep. 57 (2008): 1-60. PubMed: 18685555.
2. Stevens, J., et al. "Structure of the Uncleaved Human H3 Hemagglutinin from the Extinct 1918 Influenza Virus." Science 303 (2004): 1866-1870. PubMed: [14764887](https://pubmed.ncbi.nlm.nih.gov/14764887/).
3. Stevens, J., et al. "Structure and Receptor Specificity of the Hemagglutinin from an H5N1 Influenza Virus." Science 312 (2006): 404-410. PubMed: [16543414](https://pubmed.ncbi.nlm.nih.gov/16543414/).

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**Table 1 – Predicted Protein Sequence**

|     |   |
|-----|---|
| 1   | <a href="#">ADPQKLP</a> <a href="#">GND</a> <a href="#">NSTATLCLGH</a> <a href="#">HAVPNGTIVK</a> <a href="#">TITNDQIEVT</a> <a href="#">NATELVQSSS</a> |
| 51  | <a href="#">TGEICDSPHQ</a> <a href="#">ILDGENCTLI</a> <a href="#">DALLGDPQCD</a> <a href="#">GFQNKKWDLF</a> <a href="#">VERSKAYSNC</a>                  |
| 101 | <a href="#">YPYDVPDYAS</a> <a href="#">LRSLVASSGT</a> <a href="#">LEFNNEFW</a> <a href="#">TGVTQNGTSS</a> <a href="#">ACIRRSNSF</a>                     |
| 151 | <a href="#">FSRLNWLTHL</a> <a href="#">KFKYPALNVT</a> <a href="#">MPNNEKFDKL</a> <a href="#">YIWGVHHPGT</a> <a href="#">DNDQIFLYAQ</a>                  |
| 201 | <a href="#">ASGRITVSTK</a> <a href="#">RSQQTVIPNI</a> <a href="#">GSRPRVRNIP</a> <a href="#">SRISIIYWTIV</a> <a href="#">KPGDILLINS</a>                 |
| 251 | <a href="#">TGNLIAPRGY</a> <a href="#">FKIRSGKSSI</a> <a href="#">MRSDAPIGKC</a> <a href="#">NSECITPNGS</a> <a href="#">IPNDKPFQNV</a>                  |
| 301 | <a href="#">NRITYGACPR</a> <a href="#">YVKQNTLKLA</a> <a href="#">TGMARNVPEKQ</a> <a href="#">TRGIFGAIAG</a> <a href="#">FIENGWEGMV</a>                 |
| 351 | <a href="#">DGWYGFRHQN</a> <a href="#">SEGIGQAADL</a> <a href="#">KSTQAAIDQI</a> <a href="#">NGKLNRLIGK</a> <a href="#">TNEKFHQIEK</a>                  |
| 401 | <a href="#">EFSEVGRIQ</a> <a href="#">DLEKYVEDTK</a> <a href="#">IDLWSYNAEL</a> <a href="#">LVALENQHTI</a> <a href="#">DLTDSEMKNL</a>                   |
| 451 | <a href="#">FEKTKKQLRE</a> <a href="#">NAEDMGNGCF</a> <a href="#">KIYHKCDNAC</a> <a href="#">IGSIRNGTYD</a> <a href="#">HDVYRDEALN</a>                  |
| 501 | <a href="#">NRFQIKGSRC</a> <a href="#">RSSGRLVPRGS</a> <a href="#">PGSGYIPEAPR</a> <a href="#">DGQAYVRKDGE</a> <a href="#">WVLLSTFLGH</a>               |
| 551 | HHHHHHH   |

Plasmid-derived amino acids – [Residues 1 to 3, 508 to 515, 521, 549](#)

HA protein – [Residues 4 to 507\\*](#)

Thrombin cleavage sequence – [Residues 511 to 516](#)

Trimerizing domain – [Residues 518 to 546](#)

His Tag – [Residues 550 to 557](#)

\*This represents amino acid residues 17-520 of the A/Brisbane/10/2007 (H3N2) HA protein (GenPept: AIW60702).